

Date: Thursday, 4/12/2007 8:45:59 AM
User: Kim Johnston

Process Sheet

141.4X

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: BRACKET ASSEMBLY
Job Number	: 31730		
Estimate Number	: 10280		
P.O. Number	: N/A	Part Number	: D3137043
This Issue	: 4/12/2007	Drawing Number	: D3137 REV E
Prsht Rev.	: NC	Project Number	: N/A
First Issue	: N/A	Drawing Revision	: E
Previous Run	: 29819	Material	: N/A
		Due Date	: 5/5/2007
Written By	: <u>[Signature]</u>	Qty:	12 Um: Each
Checked & Approved By	: <u>[Signature]</u>		
Comment	: Est Rev:A 04.02.18 New issue KJ/DS		

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description:
---------	-----------------------	--------------

1.0	M174B0500X02000	17-4 SS Bar
-----	-----------------	-------------



Comment: Qty.: 0.4875 f(s)/Unit Total: 5.8502 f(s)
Material: 17-4 SS Bar per AMS 5604/5643
(M17-4-B0.500x02.000)
Identify for D3137-7
Batch: M103089

SA 07/05/02 12

2.0	BAND SAW	BAND SAW
-----	----------	----------



Comment: BAND SAW
Cut blanks: (.500" x 2.000") 5.570" long

SA 07.05.02 12

3.0	HAAS1	HAAS CNC VERTICAL MACHINING #1
-----	-------	--------------------------------



Comment: HAAS CNC VERTICAL MACHINING #1

1-Machine D3137-7 as per Folio FA3308and Dwg D3137 Identify as D3137-7

2-Deburr

3-Scribe batch number

SA/PM 07/05/03 12

4.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
-----	-----	--



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

SA/PM 07/05/03 12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 4/12/2007 8:45:59 AM

User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BRACKET ASSEMBLY

Job Number: 31730

Part Number: D3137043

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

QC8

SECOND CHECK



Comment: SECOND CHECK

MS 07/05/09

12

6.0

D31373

Guide



Comment: Qty.: 1.0000 Each(s)/Unit Total: 12.0000 Each(s)

Pick:

Qty Part Number

Description Batch

1 D3137-3

GUIDE B31761

ml 07/05/09

12

7.0

D31375

Washer



Comment: Qty.: 1.0000 Each(s)/Unit Total: 12.0000 Each(s)

Pick:

Qty Part Number

Description Batch

1 D3137-5

Washer B30344

ml 07/05/09

12

8.0

MS24694S101

Screw



Comment: Qty.: 1.0000 Each(s)/Unit Total: 12.0000 Each(s)

Pick:

Qty Part Number

Description Batch

1 MS24694-s101

Screw M103338

ml 07/05/09

12

9.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

Assemble D3137-043 as per Dwg D3137

ml 07/05/09

12

10.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

ml 07/05/10 (412)

11.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: _____

ml 07/05/10 (12)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: ☒ Date: 07/05/11

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 4/12/2007 8:45:59 AM

User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BRACKET ASSEMBLY

Job Number: 31730

Part Number: D3137043

Job Number:



Seq. #:

Machine Or Operation:

Description :

12.0

QC21

FINAL INSPECTION/W/O RELEASE



(12)

Comment: FINAL INSPECTION/W/O RELEASE

D3137043

Job Completion



U D3137043

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	31730
Description: Bracket		Part Number:	D3137-7
Inspection Dwg: D3137 Rev: E		Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.435	+/-0.010	.433	/			
0.615	+/-0.010	.623	/			
0.200	+/-0.010	.201	/			
0.380	+/-0.010	.390	/			
0.262	+/-0.010	.261	/			
Ø0.500	+0.005/-0.000	Ø.504	/			
0.79	+/-0.030	0.780	/			
2.79	+/-0.030	2.760	/			
Ø0.560	+0.005/-0.000	Ø.560	/			
0.595	+/-0.010	.596	/			
0.950	+/-0.010	.950	/			
0.605	+/-0.010	.607	/			
1.880	+/-0.010	1.880	/			
2.48	+/-0.030	2.485	/			
4.975	+/-0.010	4.980	/			
5.41	+/-0.030	5.416	/			
0.032	+/-0.010	0.029	/			
0.063	+/-0.010	.063	/			
R0.062	+/-0.010	R.062	/			
0.162	+/-0.010	.160	/			

Measured by: <i>SD/mf</i>	Audited by: <i>E</i>	Prototype Approval:	N/A
Date: 07.05.02	Date: 07.05.03	Date:	N/A

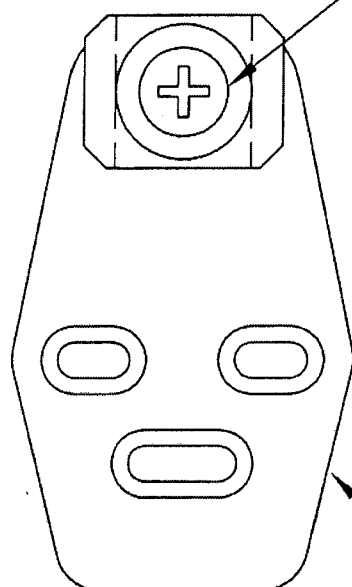
Rev	Date	Change	Revised by	Approved
A	03.11.12	New Issue P/O D3137-043	KJ/RF	
B	04.06.15	Changed & added dimensions	KJ/JLM	
C	06.03.15	Dwg Rev update	KJ/JLM <i>JA</i>	<i>JA</i>



DESIGN DS	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D3137	REV. E SHEET 1 OF 5
DATE 05.11.23		TITLE BRACKET ASSEMBLY	SCALE 1:1
A	02.04.17	NEW ISSUE	
B	03.01.16	ADD RIDGES; ADD MAT'L PROP.	
C	03.08.15	ADD -043	
D	04.11.03	RE-DESIGN D3137-5; CHANGE DIMS	
E	05.11.23	ADD -045	

RELEASED

05.12.09



MS24694-S101 SCREW
D3137-5 WASHER
D3137-3 GUIDE
INSTALL ON SAME SIDE AS C'SINKS
(OPPOSITE SIDE FROM RIDGES)

D3137-1 BRACKET (-041 SHOWN)
OR
D3137-7 BRACKET (-043 SIMILAR)
OR
D3137-9 BRACKET (-045 SIMILAR)

D3137-041 BRACKET ASSEMBLY (SHOWN)
D3137-043 BRACKET ASSEMBLY (SIMILAR)
D3137-045 BRACKET ASSEMBLY (SIMILAR)

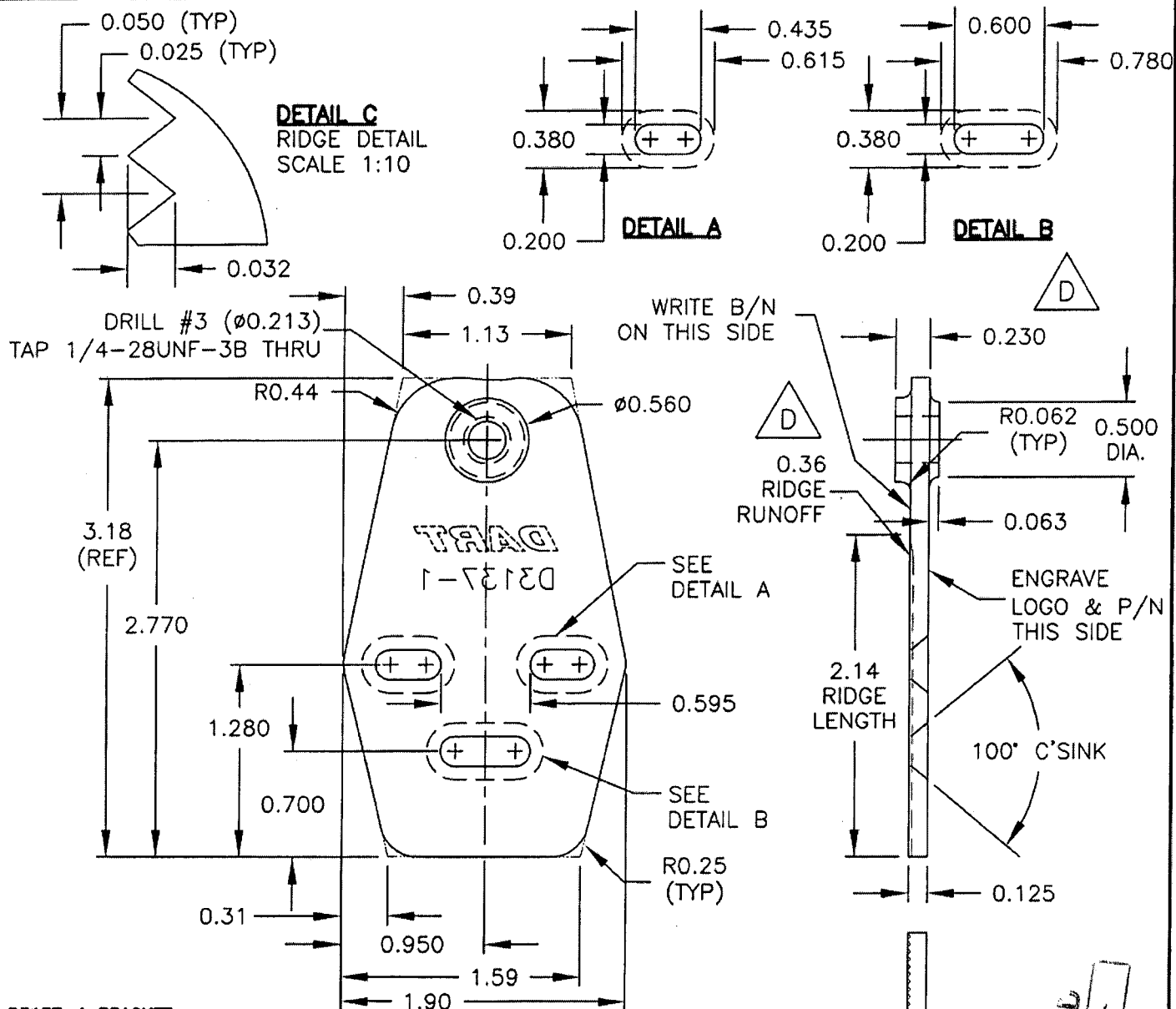
SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 31730

Copyright © 2002 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



DESIGN DS	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED ///	APPROVED ///	DRAWING NO. D3137	REV. E SHEET 2 OF 5
DATE 05.11.23		TITLE BRACKET ASSEMBLY	SCALE 1:1



D3137-1 BRACKET:

- 1) REPLACES PREMIER P/N B30-23000-105/-106 BRACKETS
- 2) MATERIAL: 17-4PH STAINLESS STEEL
PER AMS 5604 OR 5643 (REF DART SPEC. M17-4-B)
MIN ULTIMATE TENSILE = 150 ksi
MIN YIELD TENSILE = 100 ksi
- 3) FINISH: NONE
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES
- 6) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 7) ENGRAVE DART LOGO USING 0.20 & P/N USING 0.15 LETTERS TO MAX. DEPTH 0.010
WITH A LOGO MIN TOOL RAD OF 0.093 & P/N MIN TOOL RAD 0.04 AS SHOWN
- 8) IDENTIFY WITH DART B/N USING FINE POINT PERMANET INK MARKER

SEE DETAIL C

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
31730

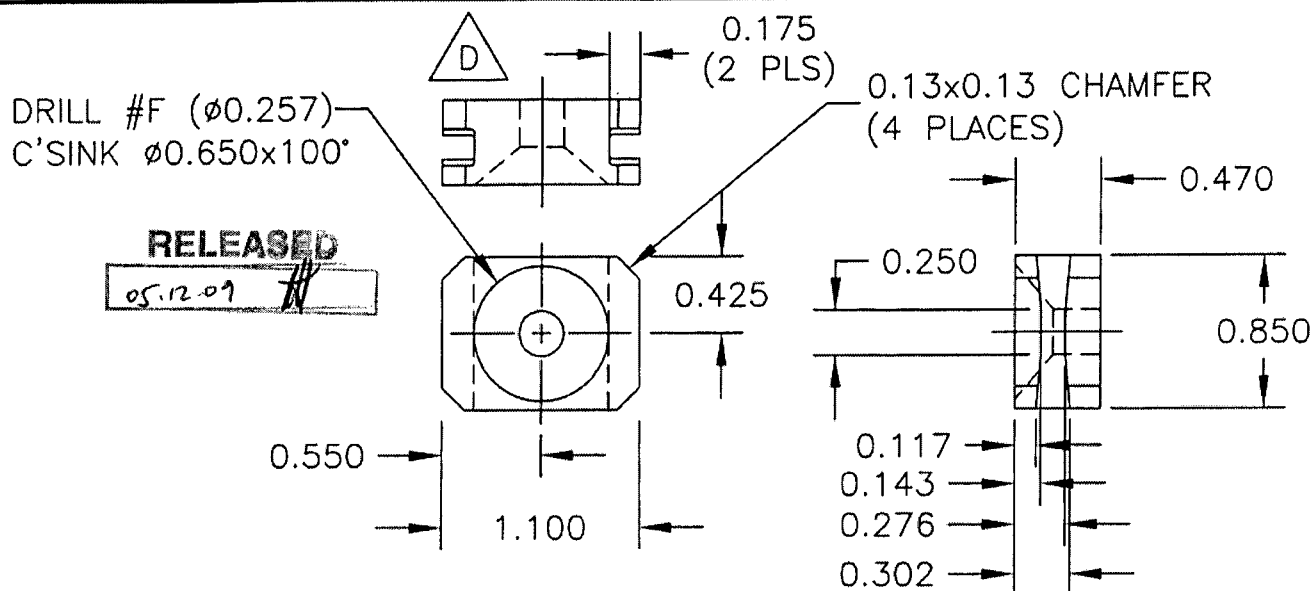
RELEASED
05/12/09

Copyright © 2002 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

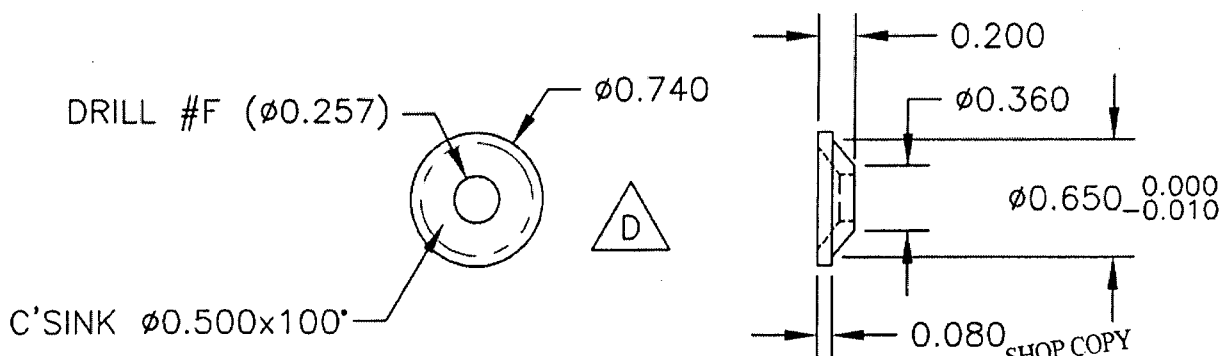


DESIGN DS	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D3137	REV. E SHEET 3 OF 5
DATE 05.11.23		TITLE BRACKET ASSEMBLY	SCALE 1:1



D3137-3 GUIDE

- 1) REPLACES PREMIER P/N B30-23000-207
- 2) MATERIAL: DELRIN BAR (REF DART SPEC. M-DELRIN-B)
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL EDGES 0.005 TO 0.015



D3137-5 WASHER

- 1) REPLACES PREMIER P/N B30-23000-209
- 2) MATERIAL: 6061-T6 (QQ-A-225/8 OR QQ-A-200/8) BAR (REF DART SPEC. M6061-T6)
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES
- 6) BREAK ALL EDGES 0.005 TO 0.015

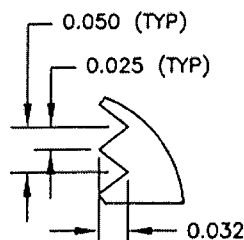
SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO COMMENT
WITHOUT NOTICE
WORK ORDER
NO. 31730

Copyright © 2002 by DART AEROSPACE LTD

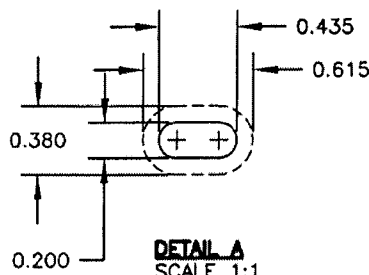
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



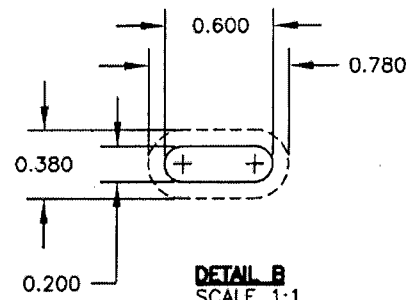
DESIGN DS	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3137	REV. E SHEET 5 OF 5
DATE 05.11.23	TITLE BRACKET ASSEMBLY		SCALE 1:2



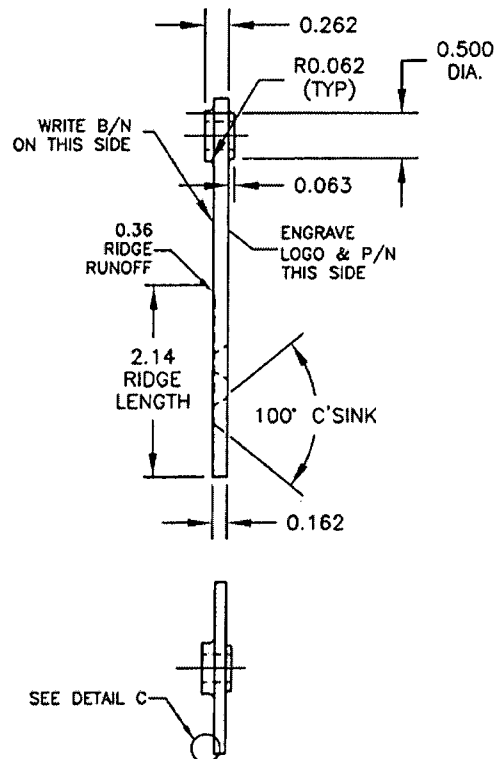
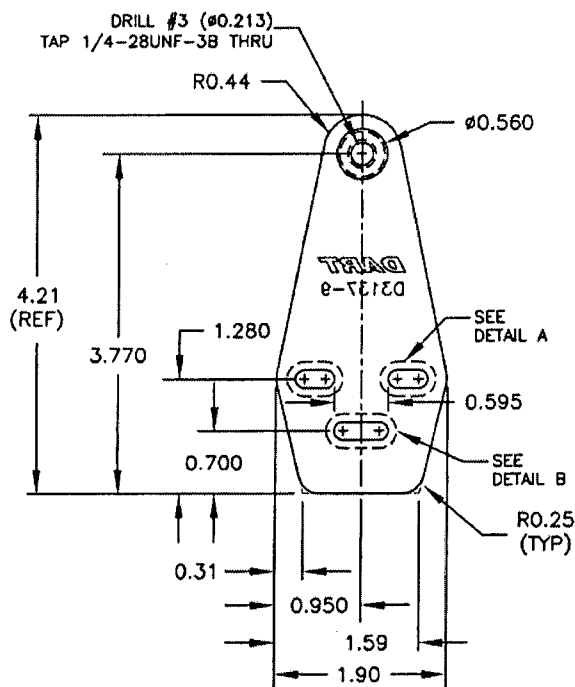
DETAIL C
RIDGE
SCALE 1:20



DETAIL A
SCALE 1:1



DETAIL B
SCALE 1:1



D3137-9 BRACKET:

- 1) REPLACES PREMIER P/N B30-23000-105/-106 BRACKETS
- 2) MATERIAL: 17-4PH STAINLESS STEEL
PER AMS 5604 OR 5643 (REF DART SPEC. M17-4-B)
MIN ULTIMATE TENSILE = 150 ksi
MIN YIELD TENSILE = 100 ksi
- 3) FINISH: NONE
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES
- 6) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 7) ENGRAVE DART LOGO USING 0.20 & P/N USING 0.15 LETTERS TO MAX. DEPTH 0.010
WITH A LOGO MIN TOOL RAD OF 0.093 & P/N MIN TOOL RAD 0.04 AS SHOWN
- 8) IDENTIFY WITH DART B/N USING FINE POINT PERMANENT INK MARKER

RELEASED

05.12.24
RETURN TO
ENGINEERING

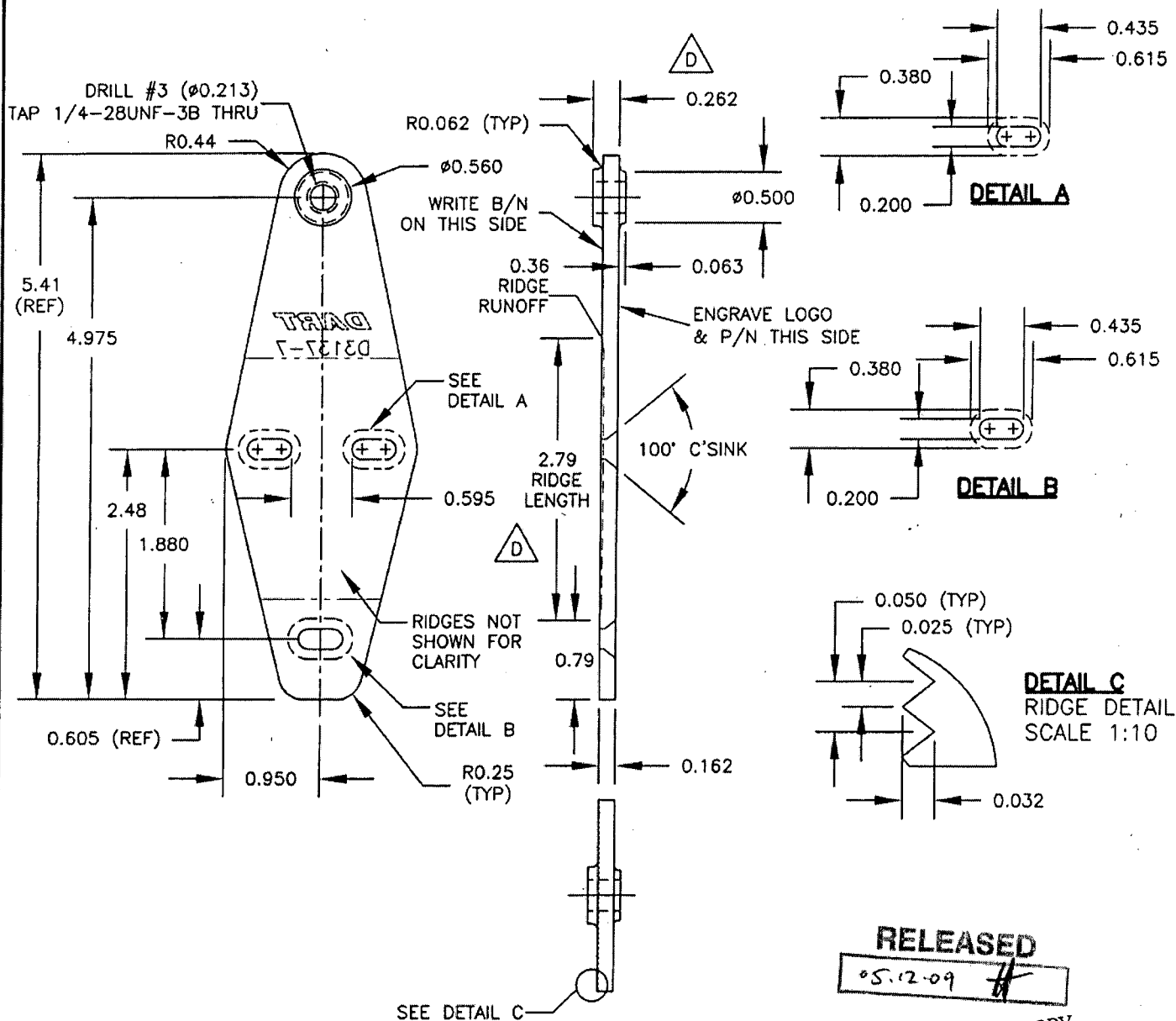
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO 31730

Copyright © 2002 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



DESIGN DS	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3137	REV. E SHEET 4 OF 5
DATE 05.11.23	TITLE BRACKET ASSEMBLY		SCALE 2:3



D3137-7 BRACKET:

- 1) MATERIAL: 17-4PH STAINLESS STEEL PER AMS 5604 OR 5643 (REF DART SPEC. M17-4-B)
MIN ULTIMATE TENSILE = 150 ksi
MIN YIELD TENSILE = 100 ksi
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 6) ENGRAVE DART LOGO USING 0.20 & P/N USING 0.15 LETTERS TO MAX. DEPTH 0.010
WITH A LOGO MIN TOOL RAD OF 0.093 & P/N MIN TOOL RAD 0.04 AS SHOWN
- 7) IDENTIFY WITH DART B/N USING FINE POINT PERMANENT INK MARKER

RELEASED

05.12.09

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 31730

Copyright © 2002 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.